

General Certificate of Secondary Education

B003

Home Economics

Unit B003: Principles of Food and Nutrition

Specimen Paper

Time: 1 hour 30 minutes

Candidates answer on the question paper.

Additional materials: None required

Candidate
Forename

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Candidate
Surname

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Centre Number

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Candidate
Number

--	--	--	--	--	--

INSTRUCTIONS TO CANDIDATES

- Write your name in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use blue or black ink. Pencil may be used for graphs and diagrams only.
- Read each answer carefully and make sure you know what you have to do before starting your answer.
- Answer **all** the questions.
- Do not write outside the box bordering each page.
- Write your answer to each question in the space provided.

INFORMATION FOR CANDIDATES

- The number of marks for each question is given in brackets [] at the end of each question or part question.
- Your Quality of Written Communication is assessed in question 5.
- The total number of marks for this paper is 80.

FOR EXAMINER'S USE

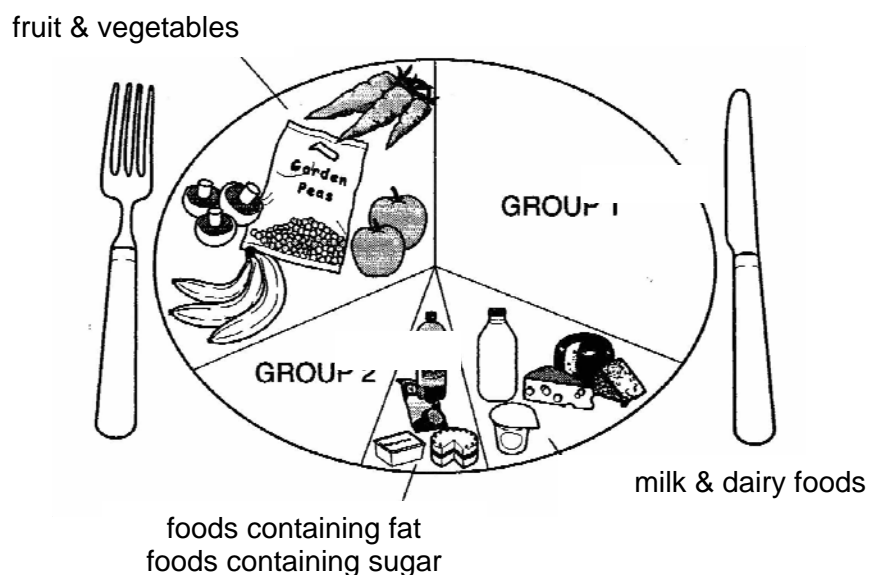
1	
2	
3	
4	
5	
TOTAL	

This document consists of **10** printed pages and **2** blank pages.

[Turn over

Answer **all** questions

- 1 Different groups of food are needed for Good Health.
Look at the food groups on the Balance of Good Health Plate below.



- (a) Two groups of food are missing from the plate.
Name **one** food from each group.

(i) [1]

(ii) [1]

- (b) (i) How many servings of fruit and vegetables are we advised to eat each day?

..... [1]

- (ii) Give **three** reasons for this advice

1 [3]

2.....

3..... [3]

- (c) Vitamin C is often lost during the preparation and cooking of fruit and vegetables.

Give **three** ways of reducing this loss.

1.....

2.....

3..... [3]

(d) People are advised to eat less fat.

Give **three** ways of reducing the amount of fat eaten.

- 1.....
- 2.....
- 3..... [3]

(e) Explain what needs to be considered when feeding young children.

.....

.....

.....

.....

.....

..... [4]

(f) To function properly people need the correct balance of protein foods

(i) Give **two** examples of HBV (High Biological Value) protein foods.

- 1
- 2 .. [2]

(ii) Give **two** examples of LBV (High Biological Value) protein foods.

- 1
- 2 .. [2]

[Total: 20]

2 (a) Look at the recipe below for making bread.

BREAD RECIPE	
500g	strong plain flour
10g	salt
1	sachet easy dried yeast
250ml	water (37 °C)
Oven Temperature:	
200 °C to 220 °C Gas Mark 6-8	

(i) State how the basic recipe could be adapted to add more fibre (NSP).

..... [1]

(ii) Why is the temperature of the water important?

..... [1]

(iii) Give **one** reason why strong plain flour is used.

..... [1]

(b) (i) Give **one** reason why a person with coeliac disease could **not** eat this bread.

..... [1]

(ii) State how this recipe could be adapted to make it suitable for coeliacs.

..... [1]

(iii) Name **two** other foods that coeliacs should **not** eat.

1

2 [2]

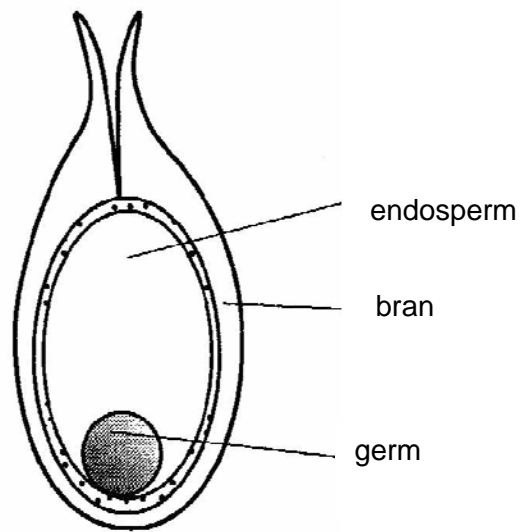
(c) Describe the qualities of a successfully cooked loaf of bread.

.....

.....

..... [4]

(d) The diagram below shows a wheat grain.



Name the part of the grain that:

(i) provides starch.

..... [1]

(ii) is rich in vitamins and minerals.

..... [1]

(iii) is used to make white flour.

..... [1]

(iv) is used to make wholemeal flour

..... [1]

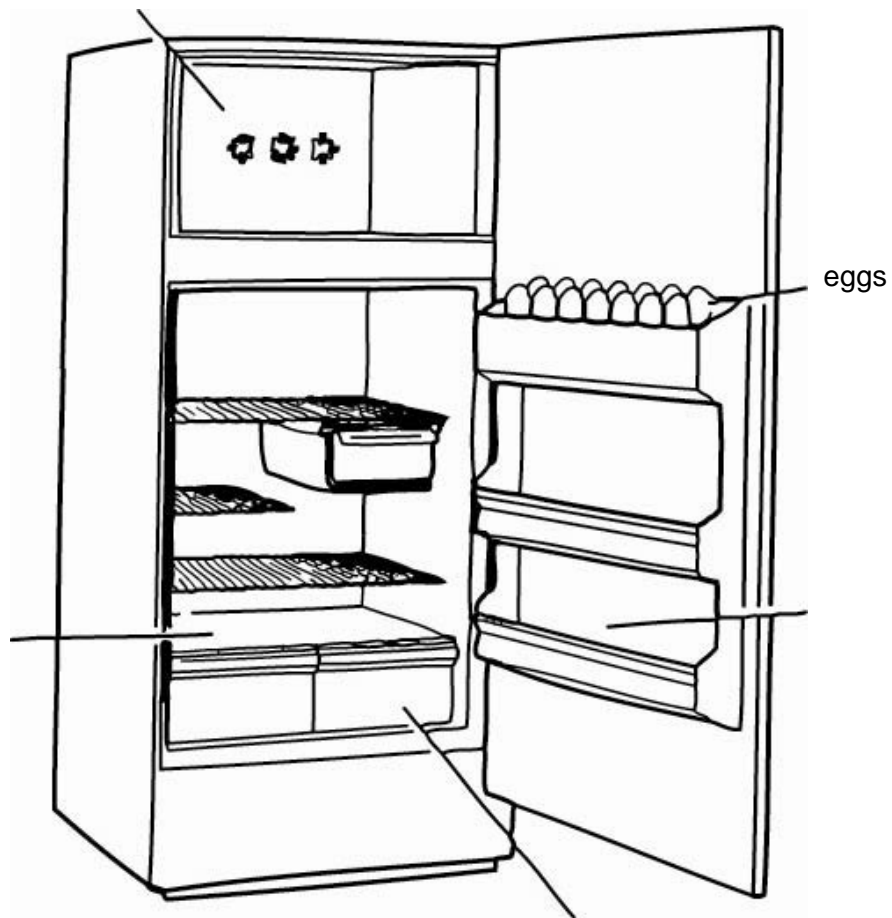
[Total: 15]

3 (a) A refrigerator is shown below.

Complete the labels on the refrigerator to show the correct place to store each of the following foods:

eggs has been completed for you

- lettuce
- carton of fresh milk
- raw minced beef
- ice cream



[4]

- (b) (i) Micro-organisms can cause food spoilage.
Bacteria is one type of micro-organism.
Name **two** more micro-organisms.

1

2 [2]

- (ii) Give **three** conditions needed for bacteria to grow.
The first one has been completed for you.

1 Moisture.....

2

3

4 [3]

- (c) Describe good hygiene practice in the fresh food section of a supermarket.

.....

.....

.....

.....

.....

..... [6]

[Total: 15]

4 Food and drink products for young children are a growing market sector.

(a) Give **three** characteristics of a food product that appeals to the young consumer.

1

2.....

3..... [3]

(b) Food products are regularly being advertised.

State **two** places, with different reasons, where a food product aimed at young children could be advertised.

Place	Reason
1	
2	

[4]

(c) Explain how food labelling benefits the consumer.

..... [8]

..... [8]
[Total: 15]

TONY Age 48. Overweight. Married. Two teenage children.
Occupation: computer operator.
Drives two miles to work.
Hobbies: watching T.V. socialising with friends.

Breakfast: cornflakes with milk, buttered toast and marmalade.

Lunch: Sandwiches (white bread) – egg, ham or tuna, crisps, chocolate bar.

Evening meal: lasagne with chips or take-away.

- Describe the problems with Tony's current diet and lifestyle.
- Explain the changes he needs to make.

This image shows a full page of white paper with horizontal dashed lines, typical of primary school writing paper. The lines are evenly spaced and run across the entire width of the page. There are no margins, text, or other markings present.

[Paper Total: 80 marks]

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The maximum mark for this paper is **80**.

Question Number	Answer	Marks	
1 (a)	Two groups of food are missing from the plate. Name one food from each group.		
(i)	ONE mark for each correct answer. Cereals, bread, potatoes, pasta or examples.	[1x1]	[1]
(ii)	ONE mark for each correct answer. Meat, fish and alternatives or examples.	[1x1]	[1]
(b)(i)	How many servings of fruit and vegetables are we advised to eat each day?		
	ONE mark for correct answer 5 – 10 servings	[1x1]	[1]
(ii)	Give <u>three</u> reasons for this advice. ONE mark for each correct answer THREE required Vitamins. Minerals. Fibre. (NSP) Add colour, variety, texture, flavour to diet. Low in calories. Fill you up, but low in calories. Antioxidants – protect against cancer, coronary heart disease.	[3x1]	[3]
(c)	Vitamin C is often lost during the preparation and cooking of fruit and vegetables. Give <u>three</u> ways of reducing this loss. ONE mark for each correct answer. THREE required Do not prepare too long before cooking/Prepare just before you need them. Tear leaves (rather than cut). Avoid long storage. Peel very thinly. Leave skin on if appropriate. Cook as quickly as possible in a small amount of water/prevent leaching. Steam or microwave. Avoid exposing too much of the surface area/do not chop into very small pieces. Serve as soon as possible after cooking, do not keep warm after cooking. Eat raw when appropriate. Use vegetable water for soup and sauces. Do not leave soaking/standing in water.	[3x1]	[3]

Question Number	Answer	Marks																													
(d)	<p>People are advised to eat less fat. Give <u>three</u> ways of reducing the amount of fat eaten.</p> <p>ONE MARK for each correct answer. THREE required.</p> <p>Cook without fat. No extra fat added during cooking. Remove visible fat from meat – skin poultry – fat on bacon. Less snack foods, cakes, biscuits and chocolate. Use lower fat spreads. Skimmed and semi skimmed milk. Reduced fat cheese, or use less strong flavoured cheese. Cut down on fried foods/grill not fry. Low fat yoghurt.</p>	[3x1]	[3]																												
(e)	<p>Explain what needs to be considered when feeding young children.</p> <p>ONE MARK for each correct point and ONE MARK for each explanation.</p> <table><tr><th>Point (TWO required)</th><th>Explanation (TWO required)</th></tr><tr><td>Attractive/colourful appearance and variety of food</td><td>To encourage good eating habits</td></tr><tr><td>Small portions</td><td>Manageable/not overfeed</td></tr><tr><td>Balanced meals/range of nutrients</td><td>Ensure a healthy balanced diet and good practice</td></tr><tr><td>Low in sugar and salt</td><td>Prevent associated health problems</td></tr><tr><td>Foods rich in calcium</td><td>To encourage growth of strong bones and teeth</td></tr><tr><td>Protein foods</td><td>To encourage growth and repair</td></tr><tr><td>Variety of tastes and textures</td><td>Encourage eating a diet of different foods</td></tr><tr><td>Limit starchy fibre rich foods</td><td>To avoid filling up and being unable to eat other nutrients</td></tr><tr><td>Stress free/fun meal times</td><td>Associate meals/eating with a pleasant experience</td></tr><tr><td>Eat a variety of fruit and vegetables – 5 a day</td><td>To prevent associated health problems. Eat in place of sweets etc</td></tr><tr><td>Eat with older children and adults</td><td>Copy good eating habits and socialising</td></tr><tr><td>Nutritious drinks</td><td>Part of a balanced diet. Replace high sugar drinks</td></tr><tr><td>Encourage taking part in food preparation</td><td>Food education</td></tr></table>			Point (TWO required)	Explanation (TWO required)	Attractive/colourful appearance and variety of food	To encourage good eating habits	Small portions	Manageable/not overfeed	Balanced meals/range of nutrients	Ensure a healthy balanced diet and good practice	Low in sugar and salt	Prevent associated health problems	Foods rich in calcium	To encourage growth of strong bones and teeth	Protein foods	To encourage growth and repair	Variety of tastes and textures	Encourage eating a diet of different foods	Limit starchy fibre rich foods	To avoid filling up and being unable to eat other nutrients	Stress free/fun meal times	Associate meals/eating with a pleasant experience	Eat a variety of fruit and vegetables – 5 a day	To prevent associated health problems. Eat in place of sweets etc	Eat with older children and adults	Copy good eating habits and socialising	Nutritious drinks	Part of a balanced diet. Replace high sugar drinks	Encourage taking part in food preparation	Food education
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Question Number	Answer	Marks	
(f)(i)	<p>To function properly people need the correct balance of protein foods. Give <u>two</u> examples of HBV (High Biological Value) protein foods.</p> <p>ONE MARK for each correct answer. TWO required.</p> <p>Meat, fish, milk, cheese, eggs, soya</p>	[2x1]	[2]
(ii)	<p>Give <u>two</u> examples of LBV (Low Biological Value) protein foods.</p> <p>ONE MARK for each correct answer. Two required.</p> <p>Peas, beans, lentils/pulses, cereals, rice, wheat flour, pasta, nuts and seeds, gelatine</p>	[2x1]	[2]
	Question 1 Total	[20]	

Question Number	Answer	Marks	
2(a)(i)	<p>State how the basic recipe could be adapted to add more fibre (NSP).</p> <p>ONE mark for each correct answer. THREE required</p> <p>Add or substitute some of the flour for: whole meal flour/nuts and seeds. Wheatmeal flour. Granary Flour. Bran</p>	[1]	[1]
(ii)	<p>Why is the temperature of the water important?</p> <p>Hot – destroy yeast/ cold slows activity correct temperature to activate the yeast.</p>	[1]	[1]
(iii)	<p>Give <u>one</u> reason why strong plain flour is used.</p> <p>High gluten content – strong elastic dough, enables CO₂ to be held in small pockets.</p>	[1]	[1]
(b)(i)	<p>Give <u>one</u> reason why a person with coeliac disease could <u>not</u> eat this bread.</p> <p>Sensitivity to the gluten</p>	[1]	[1]
(ii)	<p>State how this recipe could be adapted to make it suitable for coeliacs.</p> <p>Gluten free flour</p>	[1]	[1]
(iii)	<p>Name <u>two</u> other foods that coeliacs should <u>not</u> eat.</p> <p>ONE mark for each correct answer. Two required</p> <p>Accept any named wheat product Barley, Rye, Oats</p>	[2x1]	[2]
(c)	<p>Describe the qualities of a successfully cooked loaf of bread.</p> <p>Evenly/well risen Even colour. Appropriate browning Evenly cooked. Hollow sound when tapped on base. Not doughy Good flavour. Not “yeasty” flavour Light texture/not dense heavy texture/ soft.</p>	[4x1]	[4]

Question Number	Answer	Marks	Question Number
(d)(i)	<p>Name the part of the grain that provides starch.</p> <p>Endosperm</p>	[1]	[1]
(ii)	<p>Name the part of the grain that is rich in vitamins and minerals.</p> <p>Germ, bran</p>	[1]	[1]
(iii)	<p>Name the part of the grain that is used to make white flour.</p> <p>Endosperm</p>	[1]	[1]
(iv)	<p>Name the part of the grain that is used to make wholemeal flour.</p> <p>Whole grain/all of it/100%/ Bran</p>	[1]	[1]
	Question 2 Total	[15]	

	Answer	Marks	
3(a)	<p>Complete the labels on the refrigerator to show the correct place to store each of the following foods: ONE mark for each correct answer. FOUR required</p> <p>Lettuce – salad drawer Milk – door Minced beef - bottom shelf Ice cream – freezer</p>	[4x1]	[4]
(b)(i)	<p>Name <u>two</u> more micro-organisms. ONE mark for each correct answer. TWO required.</p> <p>Moulds Yeast</p>	[2x1]	[2]
(ii)	<p>Give <u>three</u> conditions needed for bacteria to grow. The first one has been completed for you. One mark for each correct answer. THREE required</p> <p>Food. The correct temperature. Time.</p>	[3x1]	[3]
(c)	<p>Describe good hygiene practice in the fresh food section of a supermarket. This question is marked according to the quality of response.</p> <p>High level response 4-6 marks Answered well with clear explanations.</p> <p>Mid level to low level response 0-3 marks Basic information Limited facts. List of answers</p> <p>Subject specific material – Clean equipment / surfaces / premises. Well trained staff, following strict hygiene practice. Food is fresh / appropriately displayed Correct temperature for storage. Food protected from pests and human contamination/display counter / point of sale. Packaged fresh foods – undamaged. Within the “best before” or “sell by” dates. Rotation of fresh foods. Methods of preventing cross contamination enforced. Efficient response to clearing of spills or damaged goods etc</p>	[6]	[6]
	Question 3 Total	[15]	

Question Number	Answer	Marks																	
4(a)	<p>Give <u>three</u> characteristics of a food product that appeals to the young consumer.</p> <p>ONE MARK for each correct answer THREE required Max. 2 marks for each question, for one word answers.</p> <p>Attractive presentation. colourful Associated with familiar characters, personalities etc. Taste – must be qualified. Small pieces/portions Fun shapes Novelty/attractive packaging. Healthy/low in fat/sugar/salt Easy to eat</p>	[3x1]	[3]																
(b)	<p>State <u>two</u> places, with different reasons, where a food product aimed at young children could be advertised.</p> <p>ONE MARK for each correct answer FOUR required</p> <table><tr><td><u>Place</u></td><td><u>Reason</u></td></tr><tr><td>Supermarket/shops.</td><td>Children shop with parents</td></tr><tr><td>Comic/magazines.</td><td>Children/parents read them</td></tr><tr><td>TV Radio.</td><td>“pester power”</td></tr><tr><td>Playgroups/schools/recreation.</td><td>Contact target group</td></tr><tr><td>Cinema.</td><td></td></tr><tr><td>Posters on boards/public</td><td>Become familiar with</td></tr><tr><td>Transport.</td><td>product and then want it.</td></tr></table>			<u>Place</u>	<u>Reason</u>	Supermarket/shops.	Children shop with parents	Comic/magazines.	Children/parents read them	TV Radio.	“pester power”	Playgroups/schools/recreation.	Contact target group	Cinema.		Posters on boards/public	Become familiar with	Transport.	product and then want it.
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Transport.	product and then want it.																		
(c)	<p>Explain how food labelling benefits the consumer.</p> <p>This question is marked according to the quality of response.</p> <p>High level response 6-8 marks Must be answered well with clear explanations</p> <p>Mid level response 3-5 marks Basic information using general terms Bullet point sentences</p> <p>Low level response 0-2 marks Limited facts. List of answers. Repetition.</p> <p>Subject specific material that may be covered by the candidate. Information from the food manufacturer to the consumer. To use the food and food product correctly with storage and preparation information Nutritional information to help make informed choices on dietary needs and other aspects of product composition Name and address of manufacture in case of need to contact Label must state if the food has been through any processes</p>																		

Question Number	Answer	Marks	
	<p>Ingredients listed in descending order by weight, with permitted additives to help make informed choices</p> <p>Information related to environmental awareness, symbols, use of recycled materials etc.</p> <p>Information specific to vegetarians, gluten free etc</p> <p>Microwave /cooking instructions – details of how to cook the Product - consumer choice of method</p> <p>Freezing instructions/ suitability –consumer may need to freeze the product</p> <p>Bar code records sales and stock control</p> <p>Comparison of one product with another</p> <p>Manufacturing advertising and promotion</p> <p>Litterman symbol- encourage correct disposal</p>	[8]	[8]
	Question 4 Total	[15]	

Question Number	Answer	Marks	
5	<p>The company Tony works for insists on a yearly medical examination. At his recent examination the doctor advised changes to his diet and lifestyle.</p> <ul style="list-style-type: none"> • Describe the problems with Tony's current diet and lifestyle. • Explain the changes he needs to make. <p>This question is marked according to the quality of response. In order to achieve a high level response both areas must be addressed in detail.</p> <p>A candidate answering only one part of the question remains in the medium level response and can access up to 7 marks only. Must be answered well with clear descriptions or explanations.</p> <p>If candidates only list answers they remain in the lower level response.</p> <p>Bullet point sentences can achieve up to the medium response only.</p> <p>A high level of response 12-15 The candidate will have read the data and can demonstrate an understanding of the current dietary recommendations for an adult male and explain the dietary changes needed. A whole range of specialist terms are used with precision. The candidate can demonstrate the accurate use of spelling, punctuation and grammar. The response will be well presented.</p> <p>A mid level of response 6-11 The candidate will have read the data and can demonstrate some understanding of the current dietary recommendations and explain why and how, the necessary dietary changes can be made. Basic information may be offered to support the answer but in general terms with little detail. The candidate can use a range of specialist terms with facility. There may be occasional errors in spelling, punctuation and grammar.</p> <p>A low level of response 0-5 The candidate makes comments about what is wrong with Tony's diet and gives one or two suggestions as to how he can improve it. Facts may not always relate to the contents. Basic information may be offered to support the answer but in general terms with little detail. The candidate can use a limited range of specialist terms. There will be errors in spelling, punctuation and grammar.</p>		

Question Number	Answer	Marks																									
	<p>Subject specific material that may be covered by the candidate:</p> <p>Problems:</p> <p>Overweight. Risk of becoming obese with present diet and lifestyle. Lack of adequate exercise adding health risks. Diet not balanced in nutrients. Insufficient variety of foods. Considering his age, sex, occupation and lifestyle, the diet is too high in fat, sugar and salt, leading to associated health problems. Low in dietary fibre, fruit and vegetables. Mention of the fact that the data does not show if the food is fresh or processed. Too much snacking.</p> <p>Changes:</p> <table><tr><td>Increase dietary fibre benefits.</td><td>Reduces snacking/health</td></tr><tr><td>Reduce intake of fat, sugar and salt. benefits.</td><td>Associated health</td></tr><tr><td>Replace high sugar drinks with water, Vit C & calcium.</td><td>Reduce sugar/increase</td></tr><tr><td>smoothies, milky drinks etc.</td><td>Water/full feeling prevents</td></tr><tr><td>Avoid snacks high in fat, sugar and salt. benefits/reduced health</td><td>Named Health</td></tr><tr><td>Ensure balanced meals, diet/nutrients/reduce snacking especially breakfast.</td><td>risks Balanced</td></tr><tr><td>Increase the use of fruit and vegetables. diet/as a snack</td><td>Contribution to a balanced</td></tr><tr><td>Limit take-aways</td><td>Usually high in fat.</td></tr><tr><td>Difficult to know</td><td>nutritive value.</td></tr><tr><td>Increase level of fitness/ cycle to work</td><td>Reduce risk of CHD.</td></tr><tr><td>Improve lifestyle.</td><td></td></tr><tr><td>Etc.</td><td></td></tr></table>	Increase dietary fibre benefits.	Reduces snacking/health	Reduce intake of fat, sugar and salt. benefits.	Associated health	Replace high sugar drinks with water, Vit C & calcium.	Reduce sugar/increase	smoothies, milky drinks etc.	Water/full feeling prevents	Avoid snacks high in fat, sugar and salt. benefits/reduced health	Named Health	Ensure balanced meals, diet/nutrients/reduce snacking especially breakfast.	risks Balanced	Increase the use of fruit and vegetables. diet/as a snack	Contribution to a balanced	Limit take-aways	Usually high in fat.	Difficult to know	nutritive value.	Increase level of fitness/ cycle to work	Reduce risk of CHD.	Improve lifestyle.		Etc.		[15]	[15]
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Etc.																											
	Question 5 Total	[15]																									

Assessment Objectives Grid

Question	AO1 marks	AO2 marks	AO3 marks	Total
1	14	5	1	20
2	11	4	0	15
3	7	7	1	15
4	10	5	0	15
5	6	7	2	15
	48	28	4	80